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2019

<https://doi.org/10.25969/mediarep/21860>

Veröffentlichungsversion / published version  
Zeitschriftenartikel / journal article

### Empfohlene Zitierung / Suggested Citation:

Pargman, Daniel; Svensson, Daniel: Play as Work. On the Sportification of Computer Games. In: *Digital Culture & Society. The Boundaries of Play*, Jg. 5 (2019), Nr. 2, S. 15–40. DOI: <https://doi.org/10.25969/mediarep/21860>.

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## Play as Work

### On the Sportification of Computer Games

Daniel Pargman and Daniel Svensson

#### Abstract

*Contemporary images of desirable work (for example at gaming companies or at one of the tech giants) foregrounds creativity and incorporates and idealises elements of play. Simultaneously, becoming one of the best in some particular leisure activity can require many long hours of hard, demanding work. Between on the one hand work and on the other hand leisure and play, we enter the domain of games and sports. Most classical sports originally developed from physical practices of moving the human body and these practices were, through standardization, organization and rationalization, turned into sports. Many sport researchers, (sport) historians and (sport) sociologists have pointed out that sports have gone through a process of “sportification”. Cross-country skiing is an example of an activity that has gone through a historical process of sportification, over time becoming progressively more managed and regulated. Computer games are today following a similar trajectory and have gone from being a leisure activity to becoming a competitive activity, “esports”, with professional players, international competitions, and live streams that are watched by tens of millions of viewers.*

**Keywords:** Sports, computer games, esports, sportification, training, cross-country skiing

## Work, play and sports

Work and play were oftentimes intertwined in premodern societies. While there were periods of hard work (for example harvesting), work at other times occurred at a more leisurely pace and with many intermittent breaks. Medieval society also had a very large number of holidays and festivities that structured the year and that incidentally also restricted and limited work. Even further back in time, anthropologist Marshall Sahlins (1972: 1) stated that “[hunting and gathering] was, when you come to examine it, the original affluent society”. Sahlins pointed out that there are two courses to affluence; wants may be satisfied *either* by producing much *or* by desiring little, and, by desiring little, hunters and gatherers had an abundance

of leisure. With industrialization, processes of mechanization (Giedion 1948) and “the control revolution” (Beniger 1986) took command. Not only did people work longer hours, but a strict separation (not the least mentally) between work and leisure was instituted. While work hours were gradually reduced between the mid-19th and the mid-20th century, unions and workers switched track and have during the last 50 years prioritised higher salaries rather than a shorter working week. The work week has thus “stabilised” and the 40-hour work week has more or less become a universal norm for full-time work in the Western world (with some local variations, e.g. France’s experiments with 35-hour work week and Japanese and U. S. tendencies to work longer hours, see for example Schor 2008).

With a shift from industrialism and modernity to new and different forms of social organization (e.g. “post-industrial society”, “post-modern society”, “information society”, “knowledge society” etc.), the strict division between work and leisure has become blurred. The creative class (Florida 2002) have new demands on their work and “new capitalism” (Sennett 1998; Boltanski/Chiapello 2005) in many ways demand more from their employees (Gregg 2013), while simultaneously providing employees with (certain kinds of) empowerment and playfulness at work (for example in terms of architecture, furnishing, interior decoration, gadgets, perks, activities etc.). Ferrer-Conill (2018) writes that *“in recent years, the trend of incorporating playful thinking and game elements within working processes has gained popularity among organizations and businesses. The rhetoric behind this trend is anchored in promised sources of worker empowerment, self-realization for employees and turning labour into a fun and enjoyable experience”*. Dippel/Fizek (2018) discuss the same type of blurring of the relationship between work and leisure in the context of citizen science where “Citizen science games may be perceived as laborious playgrounds [...] oscillating between qualities associated previously either with pastime or with productive or useful time”.

Contemporary images of desirable work (for example at gaming companies, at hip start-ups or at one of the tech giants) foregrounds creativity and incorporates and idealises elements of play. Simultaneously, becoming one of the best in some particular playful leisure activity can require many long hours of hard, arduous and demanding work. In the space between work and leisure (play), we enter the domain of games and sports. But exactly where are sports situated in the space between work and leisure? Although it is possible to compete in many different things, not all competitive activities – either pertaining to work or leisure – become “sports”. Sports are obviously not a natural category; certain activities *become* sports while others don’t. The type of activities that undergo a transformation into sports has changed over time. Historically, many sports originated from physical (work-related) practices of moving the human body and these practices were, through standardization, organization and rationalization, turned into sports.

Many sport researchers, (sport) historians and (sport) sociologists have pointed out that sports have gone through a process of “sportification”. Cross-country skiing is an example of such an activity, over time becoming progressively

more managed and regulated. Today computer games, associated with leisure (playing games) and possibly also with work (the games industry) are becoming a competitive (work-like) activity, “esports”, with professional players, international competitions, and live streams that are watched by tens of millions of viewers.

It could of course be appropriate to point out that long before computers were used for gaming, they were solely or primarily used for work purposes. The vanishing boundary between work and non-work use of computers and interactive systems were noted by researchers some time ago (Grudin 2005, Bødker 2006) and the first author of this paper in fact held a full-day tutorial at the 2006 International Conference on Computer-Supported Cooperative Work (CSCW) in Banff, Canada on the then-innovative topic “Collaboration for fun”. The tutorial started with a long justification of why “fun” was an appropriate topic at a conference that for 20 years had exclusively treated applications of computing in *work* settings. Support for widening the focus of the conference was however found in various places, including in a neighbouring tutorial, “A whirlwind tour of CSCW research”, that pointed out that while “The design of computer technologies for the effective support of cooperative work has been CSCW’s traditional focus [...] in recent years many exciting new areas of CSCW research have emerged with the penetration of networked communication technologies into arenas beyond the workplace”<sup>1</sup>.

In this paper we discuss processes of sportification and use cross-country skiing and esports as our primary examples. We also look at similarities and differences between these two examples and one important difference is that where classical sports often originated in work-related practices (in the case of cross-country skiing mainly in forestry and hunting), the formation of currently emerging sports (for example esports) instead often originates in playful leisure activities. However, the process of sportification has been fairly stable and we will argue that this stability can help us understand the emerging sports of today and tomorrow at the intersection of work, leisure, playful work and laborious play.

## Sports and esports

How *do* games and other activities become “sports”? Many sports originally developed from physical practices of moving the human body – from *movements*. From their humble beginnings in work-related practices, they have, through standardization, organization and rationalization been turned into competitive movements (for the participants), events for spectatorship (for a sedentary audience) and organizations/social movements (for amateurs and professional practitioners, coaches, administrators, functionaries, sponsors/investors and others). Many sport researchers, (sport) historians, (sport) sociologists and (sport) philosophers have

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1 Quoted from materials that is in the possession of the first author (screen shots, personal notes etc.).

pointed out that traditional sports have gone through a process of “sportification” (e. g. Guttman 1978; Yttergren 1996; Collinet et al. 2013), i. e. that there has been a movement from games and play towards fully-fledged sports.

While most traditional sports involve gross motor skills and vigorous movements of the human body, other sports, like archery and shooting, instead put high demands on intense concentration and on fine motor skills. Today we see the emergence of a type of sports where practitioners’ physical movements are very limited – at least when it comes to gross motor skills – and where *different* kinds of movements play an important role, namely movements inside a computer-mediated virtual environment. Computer games have gone from being a leisure activity for kids and teenagers (Ryan 2012; Sheff 2011; Harris 2014) to being a competitive activity, “esports”, with international competitions, professional players and live streams that are watched by tens of millions of viewers<sup>2</sup> (Rambusch et al. 2007; Taylor 2012; Witkowski 2012; Karhulahti 2016; Kari/Karhulahti 2016; Witkowski/Manning 2017). That esports has become hugely popular and that it represents an economic activity of importance is blatantly obvious from reading the press release from the “World’s Biggest Esports Event in History” (The Intel Extreme Masters in Katowice, Poland in February 2017):

“Along with 173,000 fans attending the stadium event and surrounding festival over the course of two weekends, the Intel Extreme Masters World Championship 2017 reached more than 46 million unique online viewers, a 35% growth from last year’s event. The event was the most broadcasted event in ESL’s history, with 70 linear and digital partners worldwide who produced and distributed content in 19 languages. Through live streams, highlight clips, and custom features on both Twitter and Facebook, the World Championship reached 55 million fans on social media channels, shattering last year’s reach of approximately 30 million.”<sup>3</sup>

While it’s important to move and keep fit for anyone who plans to spend 60 or 80 or 100 hours or more per week in front of a computer screen, movement in esports mainly take place *within* computer games, and there are both differences and similarities between these new sports and more traditional sports. Where certain traditional sports are *heavily* dependent on specialized equipment, esports are instead *totally* dependent on a well-functioning technical infrastructure of computers, networks and servers. Within the world of sports, movements over national borders have grown in lock-step with more international, global (and, when it comes to esports, also internet-based) arenas (Findling/Pelle 2004). The

2 See <https://www.statista.com/statistics/507491/esports-tournaments-by-number-viewers-global/>.

3 See <http://intextrememasters.com/news/intel-and-esl-welcome-173000-fans-at-worlds-biggest-esports-event-in-history/> as well as the official 43 seconds long trailer at <https://www.youtube.com/watch?v=01qaUdD6cgg>.

ever-growing importance of training, and of strengthening the scientific base for this training is also an important part of sportification processes in many sports (e.g. Hoberman 1992; Johnson 2009; Wrynn 2010; Heggie 2011; Park 2011; Svensson 2013; Svensson 2016; Gibson 2019; Johnson 2020; Kerr et al. 2020), including esports (Taylor 2020).

We argue that even if sports can be separated by differences in terms of what types of movements are required, and what sorts of meaning are invested in them, there are many similarities between processes where ‘gross-motor-skills-sports’ evolved from heavy physical work in the 20th century and the ‘fine-motor-skills-digital sports’ that are on the rise today. Traditional sports are characterized by a movement towards standardized, rationalized, medialized and commercialized competitive arenas. When we view esports through the lens of sportification theory and compare it to historical examples from other sports, current developments in competitive computer gaming (e.g. esports) come across as the latest addition in a relatively long tradition of activities that have gone through sportification processes. We argue that sports can be seen as a link between work and leisure, where processes of sportification gradually have or are turning (some) playful activities into professions and/or have or are turning (some) professional activities into (organised) play.

There have been endless arguments in the literature (and at pubs) about what is, what constitutes, what should or shouldn’t be a sport (e.g. Guttmann 1978; Yttergren 1996; Huizinga 1998; Barthes 2007), including whether esports in particular should or should not be regarded as sports (see Witkowski 2012; Jenny et al. 2016; Skubida 2016; Heere 2017). This issue seems to be of particular interest to philosophers as is evidenced by the one and a half special issues about esports in the journal *Sports, Ethics and Philosophy* (van Hilvoorde 2016, Edgar 2019) – including a contribution with the hard-hitting title “E-sports are not sports” (Parry 2019). We will not argue the issue here (as our focus is on how various activities *become* sports), but we suggest that it is not the athletes’ (gross motor) movements or the physical demands or something else that can be objectively observed in how a sport is practiced that makes it a sport. We are instead in agreement with Heere (2017) who argues that it is the act of *moving through processes of sportification* that eventually and over time makes something into a sport.

While recent research has pointed to institutionalization as a key (although potentially problematic) characteristic of any sport (Summerley 2019; Abanazir 2019), we believe that in order to understand how sports develop (and how they *become* sports), it is not enough to analyse their institutionalization processes. Other aspects of the process of sportification such as professionalization, regimentation and specialization, are also important.

A central aspect of both traditional and new sports is speed. We have been inspired by Virilio’s (2006) concept of dromology or “the science of speed” and will below use it to analyse the role of speed as part of the sportification logic and as an especially important aspect of new sports (such as esports).

## Empirical material

This is not primarily a paper where we present the results of a study. While we draw on two different studies, our primary goal is to generate ideas and open up vistas for further reflection and thought. This is, in short, an ideas paper where we draw from:

1. A study of esports (i. e. semi-professional or professional computer gaming). Collected research materials primarily comes from online studies, from participant observations at the 2007 World Cyber Games, from interviews with professional and semi-professional practitioners and from texts about esports (mainly from the field of computer game studies). The study of the 2007 World Cyber Games has been published elsewhere (Rambusch et al. 2007).
2. A study of the sportification of cross-country skiing in Sweden. Collected research materials primarily come from archives (mainly the archives of the Swedish Ski Federation and of the Royal Central Institute of Gymnastics) and from interviews with Swedish elite cross-country skiers who were active during the period 1950–1975. (Svensson 2016; Svensson/Sörlin 2019)
3. A review of uses of sportification theory by sport historians, philosophers and sociologists.

## Sports and modernity

The very concept of “sports” originated from physical movements of various kinds. Some sports, for example football, began as spontaneous play and as a leisure activity which later developed into a sport. Many other sports like running, jumping, swimming, skating, skiing and rowing instead developed from practical movements used in manual labour such as farming, hunting, forestry or other forms of work.

Cross-country skiing started as a means of transportation in areas where snowy winters constituted an obstacle for movement, and especially movement while hunting (Hellspong 2000). From such origins, it later became an important aspect of forestry practices, since trees were generally cut in the winter (before forestry machines made an impact on these practices). Up to at least the 1960s, forestry workers constituted the core of the Swedish national cross-country skiing team. Today few people ski as part of their job and cross-country skiing has become a leisure activity as well as a sport – with consequent implications for economical, technical and media aspects of pursuing it. Top cross-country skiers are nowadays often full-time professionals, and training methods are based on solid principles from science and professional coaching rather than on practical experience from forestry practices. This process of scientization (i. e. the increasing role of science as a base for training, nutrition etc.) of cross-country skiing commenced during

the 1940s, when physiologists at the Swedish Royal Central Institute of Gymnastics started to do research that had bearing on elite sports (Svensson 2016). The same pattern of professionalization and scientization can be seen in many other sports and the process of sportification of traditional sports occurred in parallel with the modernization and industrialization of society.

## Sportification

In general, sports can be said to develop along similar lines regardless of actual (physical) activities of the particular sport in question. Be it figure skating, football or arm wrestling, athletic activities over time tend to become more and more “sportified”. The process of sportification and components of that process has been studied by a number of scholars over the last decades (e.g. Guttmann 1978; Hoberman 1992; Yttergren 1996; Hellspong 2000; Heggie 2011). Even though sports may have their roots in the spontaneous and the instinctive, they are also affected and shaped by the societies in which they emerge and in which they exist (Guttmann 1978). Guttmann lists seven characteristics of sports that separate them from the spontaneous play and games that is to be found in history. These characteristics are *secularism*, *equality*, *specialization*, *rationalization*, *bureaucracy*, *quantification* and *records* (Guttmann 1978: 54–55). The last characteristic, *records*, is essential since Guttmann finds examples of all the others characteristics in different sports in history. Records (which includes measuring and keeping track of them) is a characteristic that exclusively exists in *modern* sports (hence the title of Guttmann’s book, “*From Ritual to Record*”) and they are intimately connected to the development of technologies of measuring time (and thus of measuring speed). Swedish sport historian Leif Yttergren has written perhaps the most elaborated account of sportification processes. Yttergren’s model of sportification also consists of seven characteristics (overlapping with Guttmann’s), namely *organization*, *equalization*, *rationalization*, *regimentation*, *specialization*, *quantification* and *standardization* (Yttergren 1996: 21–22).

We here suggest that three other characteristics, that are of great importance both to traditional and new sports, should be added to such lists, namely *commercialization* (closely linked to *professionalization*), *medialization* and *dromofication*. The top athletes in most established sports are today usually professionals, and media is an integral part of any major sport as well as one of the foundations for today’s ever-growing sports economies and of commercialization (e.g. Evens, Iosifidis/Smith 2013; Riper 2013; Zhang/Huang/Nauright 2018). Furthermore, the role of media and spectatorship has been identified as one of the important differences between modern sports and earlier sport-like practices (Hellspong 2000). Dromofication refers to the constant increase of speed in many sports and indeed also to the increasing speed of sportification itself. This is mostly visible as the constant striving for setting new records (as in athletics), the constant increase of the speed and intensity of various games (such as football),



and in the relative rapidity with which new sports such as esports are sportified (compared to the long and slow processes in football, skiing and other sports with a longer history).

As stated above, sports have traditionally been closely connected to physicality, to physical movements and gross motor skills (e.g. Guttmann 1978; Sands 1999; Caillois 2001). Running, cross-country skiing, ice-skating, swimming and rowing were all modes of transportation that later – mainly in the 20th century – developed into sports (Guttmann 1978; Yttergren 1996; Hellspong 2000). The physical component in these sports is very strong and moving as fast and for as long as possible has been the essence in the sportified version of these activities. Comparison of results have been made possible by the development of more precise 19th and 20th century technologies for accurately measuring distance and time, as well as the standardization of tracks and arenas which is an important aspect of sportification (Guttmann 1978).

It is also possible to regard sports as a mirror of society and of the time and place where the sport in question was developed. Skiing was turned into a sport at a time when it was still an important means of transportation. Motorsports, driven by explosive energy-intensive mechanical movements were enabled by the internal combustion engine and “naturally” rose to popularity in the car society (Lundin 2004, 2008). Downhill skiing was popularized in tandem with the construction of ski lifts (Anderson 2012) and skateboard, BMX and parkour (e.g. individualized movements in the urban environment) arose in a fully urbanized society. Esports have similarly risen to prominence in a fully developed information society, where many have ample access to computing power, connectivity and bandwidth – as well as to the necessary knowledge, skills, values, norms and ideas needed to make the material technologies work (for them) (Shove et al. 2012).

### **Rationality in sports – an example from cross-country skiing**

All sports have gone through a process of sportification. Rationalization is an important aspect of that process and not least in the context of training methods and preparations. Taking cross-country skiing as an example, training was a deeply *personal* process in the late 19th and early 20th century. As late as in the 1940's, when international federations, competitions, rules and other signs of sportification had taken hold, training was still neither scientific nor systematic. Training meant skiing, or, if there was no snow available, running. This began to change in the 1950's. In 1954, the Swedish Ski Association sought help from physiologists at the Royal Central Institute of Gymnastics in Stockholm in the hope that the application of scientific knowledge could improve the results of Swedish skiers internationally. The physiologists engaged in the task by testing athletes on bicycle ergometers, by experimenting with preparations regarding carbohydrate diets, by stressing the importance of drinking sufficient quantities of water

before and during exercises and by examining the endurance effect of various training methods. Sports training gradually became more specialized, breaking down the art of skiing into different subroutines that could each be enhanced separately from other subroutines (Svensson 2016). It is for example possible to do upper-body training to increase endurance and speed in poling, or to do interval training to raise maximum oxygen uptake and the lactic acid threshold. There are interesting similarities between such evolving practices/training regimes and the pattern of thinking that underpins Adam Smith's famous example (1827) of how the production of pins in a factory could be reorganized and made more efficient by having workers specialize and repetitively perform a limited number of broken-down routine tasks.

The development of scientific and specialized training methods enters at a later stage in the processes of sportification (Svensson 2016) and we will compare these developments to emerging practices in esports below. It is however worth noting the similarities between training to become a champion in cross-country skiing during the 1940's and training to become an esports champion today. Training originally – in both cases – meant little more than skiing or little more than pouring time into playing the esports game you aimed to compete in (Kari/Karhulahti 2016: 58–59). With a more “professional” attitude, play is instead turned to work (e.g. gradually adopts work-like characteristics such as a Counter-strike team having a regular schedule for training together).

In the case of cross-country skiing, rational scientific methods started to affect skiing practices slowly at first and later more rapidly. Swedish cross-country skiers' results improved during the 1960s, and physiologists had a major influence in the Swedish national cross-country skiing team. Typically, the scientists would gather a number of different subjects ranging from those who were “only” well-trained all the way up to the very elite of Swedish skiers. These subjects were then taken to the laboratory for a couple of days where they underwent a specific regime of food, sleep and exercise in order to produce comparable results (Hedman 1957). The Swedish Ski Association were at the time prepared to let their skiers undergo a rigorous scientific regime with relatively far-reaching consequences in the hope of improving their results. The scientists were eager to test their methods on elite athletes. In short, these tests were understood as mutually beneficial for both the scientific and the skiing communities.

There was a growing understanding within the sport that it would soon be hard to compete internationally without making use of the fruits of systematic scientific investigations aimed at improving the results. The first step was thus for science to take an interest in how human bodies performed in different sports and what types of physiology, muscles and skills were needed. The next step was for sports organizations, coaches and practitioners to take an interest in and to incorporate scientific, rationalized training theory into their training regimes. In cross-country skiing, this was a process that started in the 1940s but it took more than 30 years before scientific results had a major impact on the actual training

methods (Svensson 2016; Sandbakk 2017). An important factor in this process was the aim of nations (exemplified by Sweden in the case of cross-country skiing) to fund research on rational endurance training in the hope that this would bring positive health outcomes *for the entire Swedish population*.

It could be that arguments today about increasing general computer skills in the population could play a similar role as did the allure of positive health outcomes in Swedish society in the 1950s. If so, we could soon see research aiming to outline rational training methods to increase computer skills for a broader public and using elite esports athletes as research subjects much like elite skiers were being researched in the 1950s. And if not in Sweden, then perhaps in South Korea where it has been suggested that esports has become the new national sport<sup>4</sup> (Jin 2010; Taylor 2012).

### Sportification reaches out

Parallel to decades-long (and ongoing) processes of sportification of “traditional sports”, new sports appear, or are “invented” all the time. The last 20 years have for example seen the emergence of so-called “extreme sports”, so named not the least because of the associated dangers. Beyond the element of danger (free climbing), extreme sports often also involving high speeds (downhill mountain biking), large heights (paragliding) or specialized equipment (paintball). We have here chosen to sidestep discussions about what actually constitutes a sport and what doesn’t, and instead settle at pointing out that no matter how contentious or outrageous it will be to some to confer the status of “sport” on some novel (possibly marginal and/or dangerous) activity, also these (perhaps-sports or non-sport) activities seem to go through the same processes of sportification that Guttmann (1978) and Yttergren (1996) have identified. This seem to be true even for activities that start out as being more rooted in aesthetics and sub-cultures than within a traditional sports framework like for example parkour, skateboard or roller-derby (Sailors 2013).

Although physical activity would seem to be a common-sense prerequisite to conferring the status of “sport” on an activity for many, also other activities go through processes of sportification. That is, characteristics of the sportification process (organization, specialization, quantification etc.) are not restricted to only physical activities, but can probably with good reason be extended to most activities where it is possible to compete. In this paper we are especially interested in comparing traditional sports (e.g. cross-country skiing) with an activity that does not involve physical movements to any larger extent, e.g. computer gaming (esports). It is however not correct to discuss esports in terms of “lacking physical movements”. It is more correct to state that while esports lacks the exercise of

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4 See for example BBC’s “Video gaming: South Korea’s new national sport?” (2015) Available online at: <http://www.bbc.com/news/av/world-asia-35047733/video-gaming-south-korea-s-new-national-sport>.

“gross motor skills” (e.g. skills in which large muscle groups produce movement, see further Haibach et al. 2011), esports do involve the exercise of “fine motor skills” (e.g. skills in which smaller muscle groups produce precise movements, see further Haibach et al. 2011; Witkowski 2012).

Esports has come a long way in a short period of time in terms of sportification. An example of this is the founding of the International eSports Federation (IeSF) in 2008 with the goal of standardizing and promoting esports. Leagues, associations and teams have both before and since 2008 formed the structure within which professional esports evolves (Taylor 2012: 248).

## On sports, old and new

In this section, we briefly raise and discuss a number of analytical topics that we cannot develop here due to limitations in space, but that we encourage others to further explore. More specifically, we discuss similarities and differences between traditional sports and esports in terms of 1) rational training methods, 2) the role of speed in emerging sports and in sportification and 3) issues pertaining to materiality and spatiality.

### Rational training methods

The rationalization of training methods is closely tied to the sportification process. When sports were still performed by amateurs and mainly as national events, a good general physique coupled with relatively limited training could be sufficient to reach prominent positions provided that the athlete had talent. Nowadays (only) talent is not enough. To be able to compete in a (professionalized) international sport, copious amounts of training is a necessary prerequisite – 10.000 hours is often used to illustrate the general scale of necessary investments in time. But even this amount of training is not enough in itself if the training is not conducted “rationally”. Science today contributes with “rational training methods” for every major sport. The melding of science into sports began in sports where technique and endurance were the skills mainly required to succeed (cross-country skiing, running), but this trend is now evident in more complex sports such as football as well. It seems inevitable that developments in the intersection of sports and information technologies (sensors, quantified self, big data) could be used to make training even more “rational”<sup>5</sup> (e.g. instrumental, goal-oriented).

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5 See for example Research Institutes of Sweden’s (RISE) research project “Internet of Sports”. “To drive innovation, we collaborate with research and sports organizations, industry partners and product developers. Together, we invent new products and services that support athletes, coaches and others in their quest for excellence or just better achievements. Important partners are also companies and organizations

Training in cross-country skiing has gone from a general and experience-based type of training where the main activity was actual skiing, to a more specialized and rationalized type of training aimed at specific abilities or muscle groups (Svensson 2016). We now see early tendencies of “rational training methods” being developed in esports as well, i.e. methods that goes beyond an emphasis of pouring time into an endeavour, repeatedly practicing in-game manoeuvres and pitting players and teams against each other. Skubida (2016) describes an intriguing aspect of esports, perhaps comparable to being on an (eternal) training camp in traditional sports:

“[C]urrently every professional eSports team owns a so-called gaming house – a house where the whole team (and often managers, owners, analysts, coaches) lives together, with a separate area consisting of computers and all necessary equipment to practice (gaming room).”

A gaming house can have many and varying functions that go beyond training; Skubida (2016) suggest that a gaming house can reduce cultural and language barriers in teams that have members from different nations and cultural backgrounds and that it can help players bond and improve teamwork. Those arguments are valid also for instituting “gaming houses” or “academies” for junior professional football players, something that does indeed happen in some football clubs such as for example FC Nordsjælland (Denmark), FC Barcelona (Spain), Liverpool FC (UK) and in national organizations (Clariefontaine, France). The arrangement of living in a gaming house is very evocative and it should be pointed out that such a setup could easily be turned into a regimented life with little autonomy and scarce control over daily schedules, reminiscent of “total institutions” (Goffman 1961) such as prisons, monasteries, boarding schools, mental institutions, army barracks etc. From an instrumental perspective it is clear that a well-functioning gaming house is at odds with notions of computer gaming “just” being a playful leisure pursuit. But what are the primary functions of a gaming house and what does it represent? Cost-savings? Chaperoning young people who live abroad? Laborious play? Playful work? Is it even possible to determine if a gaming house epitomises “work” or “play” in the first place? Such questions await the result of a 21st century social psychologist, following in Erwin Goffman’s footsteps, who conducts a thorough study of such institutions.

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whose main goal is to provide sports experiences to the audience, such as arenas, destinations, and media companies. Our expertise ranges from advanced sensor systems, smart materials and clothing, interactive equipment, big data analysis and visualizations to interaction design, game mechanics and user experiences, as well as the technology infrastructure needed for the next generation of smart products.” See: <https://www.swedishict.se/key-areas/internet-of-sports-and-well-being> and <https://www.sics.se/projects/internet-of-sports>.

The existence of gaming houses does however not in itself say very much about the rationality (or otherwise) of esports training methods. A gaming house could be used for pouring immense amounts of time into training/playing computer games, or it could be used for more rationalized forms of training. Since the physical component of esports performances is less emphasized in comparison to other sports, it is logical that rational training methods for esports will tend to emphasize the mental aspects of having a stable psyche and performing well under pressure in this fast-paced “twitchy” activity. According to pioneering studies of the training regimes of elite esports athletes, many spend more than an hour a day on physical training, apart from hours and hours of in-game training (Kari/Karhulahti 2016: 59–60). Devoting training to more specialized aspects of gaming, such as the ability to stay focused for longer periods of time due to improved general physical status, is an early sign of a more specialized type of training for esports athletes. Following the sportification model, we could anticipate further developments of training methods in the coming years with specialized methods being designed to increase speed, endurance and decision-making under pressure. To the extent that in-game ability increases with the physical ability of the esports athlete, we might also see an increased emphasis on “keeping fit” and on specialized exercises to practice dexterity of fingers, hands and wrists and on stretching as well as other exercises to prevent (wrist and other) injuries.

It is interesting to reflect upon how the scientific interest in sports has developed in the past and compare it to present (or projected future) scientific interest in esports. Early scientific interest did not regard sports in a particularly positive light but was rather concerned with potential hazards of physical training, such as heart disease or “abnormal” musculature. This kind of critique was, at least in Sweden, often voiced by orthopaedists and doctors who favoured Swedish gymnastics over sports (Söderberg 1998). This attitude later changed into a marked interest in sports as an interesting object to study, and eventually in an active participation of science in the advancement of training, sports and wellbeing for the masses (Bolling 2005; Qviström 2013; Svensson 2016).

With the professionalization of sports and the emergence of a growing sports economy, there are now scientific studies that focus on the benefits of sport itself as well as in preventing injuries and maximizing results. Similarly, many scientists have hitherto harboured a general scepticism or a great concern for the potential dangers of playing computer games (van Hilvoorde 2016: 1). We now see that this shifting and with considerable attention being given to esports as an interesting field of study (e.g.: Reitman et al. 2019; Rambusch et al. 2007; Hutchins 2008; Jonasson/Thiborg 2010; Taylor 2011; Taylor 2012). There are already attempts at identifying and preventing injuries among esports athletes (DiFrancisco-Donoghue et al. 2019) and specific training centres are being built with the explicit goal of enhancing performance of esports athletes (Smith 2018). Cognitive scientists and others are also studying performance and how it can be improved (Reitman et al.

2019: 10; Taylor 2020). Overviews of psychological research relating to esports also hint at the rapid advancement of specialized studies for understanding and ultimately increasing performance (Bányai et al. 2019). The rising interest in esports from researchers in various disciplines is testament to the ongoing sportification process and of how rationalization of training methods and other aspects of scientization are becoming important criteria in that process.

### **Faster sports, faster sportification**

French philosopher Paul Virilio argues that speed is the primary factor in human development and that it has shaped our societies in innumerable ways (Virilio 2006). According to Virilio's theory, fast technologies and fast practices tend to replace slower ones over time. In work, the issue of speed has been addressed by Taylorism, scientific management, new public management, lean production and various forms of rationalization movements. But is speed as important in play? In both of the fields most relevant to this article, sports and information and communications technologies (ICT), speed is of essence. Our understanding of internet access and computer development is often framed in terms of speed and ICT companies have used speed as a key factor in their marketing campaigns for decades (Lennerfors 2014: 286–287). Previous research has indicated the vital role of speed in ICT in general and in computer games in particular (Lennerfors 2014; Wade 2009). Others have independently highlighted that sports is an area that is increasingly focused on speed (Redhead 2011). Speed has long been a factor in many modern sports as illustrated by the motto of the Olympic Movement; “Citius, Altius, Fortius” (Faster, Higher, Stronger). While starting from significantly different “levels” of speed, Virilio (2006) would argue that there is constant pressure to increase the speed in traditional as well as in computer-mediated sports.

Speed is indisputably transforming the sport experience in both traditional and computer-mediated sports. Both the sports performance itself as well as how it is transferred to spectators through media has been subjected to increasing speeds. Football matches and cross-country ski races are conducted at higher speeds today than 50 years ago as an outcome of sportification processes, in particular due to changes in technology and rationalized training regimes that have enabled faster performances (Fouché 2017; Redhead 2011: 99–100). Speed was important also in the early 20th century ski races such as Vasaloppet or Nordenskiöldsløppet, but not to the same extent that it is today. Other factors like endurance, style and the ability to finish at all was held in high esteem (and some participants took the time to pause for dinner during the race). In today's international ski competitions, speed is the central factor and those who compete for top positions don't even have time to stop to drink water (which instead is consumed while skiing). “Dromofication” or speed-up could in fact be a possible addition to the criteria of sportification and it is visible in almost every sport. This follows a

general speed-up (dromofication) of various aspects of modern society (Rosa 2010; Rosa 2013), not least evident in labour. In esports, this is even more evident. Here dromology is at work on three levels:

1. Esports itself is dependent on speedy ICT (equipment and infrastructure) and the rise of esports has been strongest in countries with a well-developed high-speed ICT infrastructure such as South Korea (Jin 2010: 66; Taylor 2012).
2. Speed is essential also *inside* the games. Professional esports athletes measure their performance in “actions per minute” (APM) where “[m]ost professional players can get up to five or six hundred actions per minute” (Lejacq 2013). Players have “one [hand] on the mouse and their other on the left side of the keyboard, both moving at blinding speed” (Lejacq 2013). It is important to first learn to master meaningful and skilful actions, but at the very highest professional esports levels, everybody knows exactly what to do and how to do it which leaves speed (and accuracy) as decisive factors (Wong 2014). This strengthens the argument made by van Hilvoorde and Pot (2016), e.g. that motor skills and physical expertise relating to speed are vital for elite gamers and that this unites esports with many earlier sports.
3. The sportification process is itself faster than it was in many traditional sports. While sports such as skiing or football took decades to become professionalized, organized, specialized etc., these criteria were reached much more speedily within parts of the esports community (Summerley 2019: 15; Abanazir 2019).

There is also a blending of traditional sports and esports and computer games influence sport broadcasts and as athletes (who are sometimes portrayed in computer games) play computer games both for leisure and as a form of training (Taylor 2012: 237). A recent example is the initiative by the Bundesliga club Hertha Berlin who in December 2017 became the first German elite football club with an in-house esports academy. The Hertha Berlin esports academy will (naturally) focus on playing and competing in the football computer game FIFA (Hertha Berlin 2017). This development indicates that sportification of esports not only replicate earlier sportification processes in sports like football (Summerley 2019; Abanazir 2019), but can also take place within existing frameworks of such sports. Using existing institutional structures to speed up the sportification process has been successful in other sports, such as women’s football (Svensson/Oppenheim 2019). Digital technology is increasingly used in traditional sports (van Hilvoorde 2016: 2), and esports can use traditional sports as a base for games like the EA Sports FIFA or NHL computer games series with their annual updates (new players, new rankings etc.).

If we follow Virilio’s line of thinking about dromology further, it would be possible to argue that speed is becoming more and more relevant in every sport and that fast sports (like basketball) are outcompeting slower ones (like baseball) in the



same way that fast technologies are replacing slower technologies in labour-related practices and elsewhere. We have argued that to computer-mediated sports such as esports, speed is a key attribute. We also suggest that sportification involves an element of dromofication and that speed furthermore has become more important (and performances faster) also in traditional sports such as football, skiing and running. What then is the fate of those types of sports that cannot keep up with these developments? Can baseball, cricket, race walking and archery adapt to or escape this speed-up, or, are they destined to lose in popularity? If there is a trend towards the dromofication of sports, esports will continue to grow in popularity while slower sports loose speed (sic!).

### **Materiality and spatiality in traditional and computer-mediated sports**

In some sports, the best person (or team) will have a much harder time winning unless they also have access to “the right stuff” (the right bicycles, the right golf clubs, the right race car or the right combination of skis and ski wax knowledge). Technoscientific developments have led to increased performance and better results in several sports (Haake 2009) and have made equipment and access to the latest training science an important factor for winning (Fouché 2017). Esports differ significantly because it’s not even possible to compete without the right (high-tech) equipment. Having access to an internet-connected computer (or gaming console) is the one fundamental requirement onto which other demands are added. Living and training in a country with a reliable and technically advanced infrastructure is another predictor of success as esports doesn’t just use specialized equipment but are rather mediated by – and thus totally dependent on – computers and networks. The computer and concordant networks are not just the tools of the trade (comparable to bicycles, golf clubs, race cars, skis) but also constitute *the arena itself*.

Standardization of tracks and arenas are an important aspect of sportification in traditional sports. The esports equivalent is standardization of equipment and game settings. Organizers of esports competitions go to great lengths to ensure (and police) that all participants compete on a level playing field and have access to *exactly* the same hardware and software equipment, although there is more choice when it comes to peripherals such as keyboards, computer mouses, mousepads etc. In esports, where participants compete in various – but a limited number – of computer games (Al Dafai 2016), this creates a situation where the arena or playing field to some extent is owned by a game developer/publisher who “typically still see themselves first and foremost as a game producer – not sports provider” (Taylor 2012: 166). That game producer might, for example, have a commercial interest in “encouraging” players to upgrade the game regularly (Rambusch et al. 2007) and hardware sponsors who want to promote flat screen LCD monitors have overridden players’ wishes to use the (for them superior) old-school CRT monitors (Taylor 2012). Taylor describes a particular struggle between two organizations that both

could be said to have the best interests of esports in mind, but where these organisations still have different and conflicting ideas about who “owns” an esports (and thus have the ultimate authority to make binding decisions about competitions in/with that esports title). The disagreement between the (state-supported) Korea E-Sports Association (KeSPA) and the video game developer/publisher Blizzard basically boils down to the question “who owns the computer game Starcraft 2?”, or more generally, “who makes important decisions and who decides the rules when it comes to esports competitions around the title Starcraft 2?” (Taylor 2012: 159–173).

Another interesting characteristic of esports is that the popularity of particular computer games varies over time and there is relentless pressure from new games to push “old” games aside. There is no consensus between different tournaments and competitions regarding exactly what games to compete in, and the mix of games hosted at tournaments change over time. But how can you build a stable foundation for esports if you can’t stabilize the core object that your competitions revolve around? How can processes of sportification (for example standardization and records) evolve during such shifting conditions? These fast-paced changes also pose problems for the esports practitioners who over time might have to master and switch to new games in order to make a second (and a third and a fourth) career.

A particular characteristic of computer-mediated sports is the dissolution of space and to some extent time, which is also one of the characteristics of Virilio’s (2006) *dromology*. As apart from traditional sports, it is not necessary to congregate in a particular physical location to compete in esports. Participants could theoretically be disbursed both within and between countries and even continents and still play with or against each other. Playing competitive computer games against opponents on another continent is not optimal as the “lag” (turn-around time), while small, could still turn out to be significant within the context of a fast-paced computer game. This is yet another reason for why technical infrastructure is important – in some countries (for example India) even playing against someone on the other side of the same city could be a challenge in terms of lag and delays. There are thus still reasons to physically gather participants (and spectators) for important tournaments and while perhaps not always strictly necessary from a technically point of view, fairness and control over the arena or the playing field is yet another reason to gather participants.

The sports arena is of utmost importance in traditional sports from the Olympics to the modern stadiums of football (Wembley, Anfield), baseball (Fenway Park, Yankee Stadium) and skiing (Holmenkollen, the Vasaloppet Arena). The spatial aspects of the arena carry huge significance and are sometimes developed into something akin to a cultural heritage site. The landscapes of esports are quite different, resembling “dromoscapes” in which the players are habituated to “dromoscopy” (speed vision) and to seeing the world move at high speed (Lennerfors 2014: 293). Speed is remarkably high in esports even compared to traditionally fast sports like F1 or speedway and (as mentioned above) professional esports athletes can routinely perform many hundred “actions per minute” (APM).

Spatial-geographical factors can also have effects on which local communities (in terms of regions and countries) practice and excel at different sports. In computer-mediated sports, spatial-geographical factors are not nearly as important, but techno-infrastructure or “technomass” (Hornborg 2001) – which is closely correlated to affluence and GDP/capita – is. In esports, there is a marked detachment from the landscape and the spatial setting in favour of a non-spatial reproducible setting that is built on top of a vast Internet-based technical infrastructure. Landscapes of jogging, skiing and football are also reproducible and “portable” in the sense that you can create and re-create them almost anywhere (Qviström, 2013). Still, creating an online arena for esports is far less tied to specific places (physical spaces) that are anchored in landscapes compared to the practices of for example building skiing tracks. In esports “players with access to a computer and the Internet can compete day and night, whenever they want” (Jonasson/Thiborg 2010: 293). Even the esports audiences are distributed over the globe, primarily partaking in events through multiple streams over the Internet rather than through mass-mediated broadcasts (Taylor 2012). While certain streaming services (for example twitch.tv) are more popular than others, these are to be regarded as “channels” (for distribution/consumption of esports) rather than as “arenas” (e.g. places for competitions).

## Discussion

What makes a sport? There are of course many answers to that question, but a common one involves the characteristics presented by sportification theory. Standardization, specialization, rationalization, regimentation, professionalization and other criteria for sportification are evident in all major sports in the world today. Understanding such drivers and their effects are important for understanding the transformation of sport from a pastime to a professional activity and from play to work (possibly passing by “stages” of laborious play and playful work). Sportification is also a crucial factor when it comes to training. At an early stage of that process, training methods for sport-like activities are typically individual, loosely organized and absent of scientific influences. In most sports (e.g. skiing or football) such haphazard practices gradually changed during the 20th century to the extent that there are now specialized research centres that specifically does research on how to improve training methods in specific sports.

If sportification theory holds, it can reveal a great deal about future sports. In the case of esports, we now see many signs of sportification such as regimentation, organization on both national and international levels, and professionalization through sponsored teams (Taylor 2012). We also see how this process has relied more on corporate funding and top-down initiatives than the bottom-up grassroots sportification processes that characterised many earlier sports (Summerley

2019: 8). Such a moneyed, “corporate” dimension of the sportification of esports has accentuated and accelerated the blend between play and work.

Esports are well positioned to become a major, global sport (Miah 2019). Conscious and far-reaching sportification processes such as the international organization of esports in leagues, teams and associations show the way. The skills needed to become an elite gamer, including lightning-fast virtuoso performances in front of computer screens and inside computer games fit the inner logic of sports and sportification processes where a constant increase of speed has taken place. As pointed out by van Hilvoorde/Pot (2016: 19), motor skills and physical performance is vital in esports – just as they are in traditional sports. We argue that it has thus far been a “sportification deficit” rather than a lack of physical demands that has made it possible for governing bodies of traditional sport to dismiss esports.

As suggested by Jonasson (2016: 40), esports has not challenged traditional sports as esports to a large extent instead have copied more traditional ways of organizing and institutionalizing its activities. In this article, we have expanded this to suggest more elements of sportification, namely: *medialization*, *commercialization* and *dromofication* (i. e. the constant increase of speed).

We hypothesize that future developments of esports can be fairly accurately predicted through the lens of sportification. Esports will continue to grow, both in numbers of players and spectators and in terms of its economy and reach. There will be increasingly coherent regimentation and the national and international esports federations will increase their status. Esports will make a try at becoming an Olympic sport, and probably succeed. There will be scientific studies aimed specifically at finding the most rational training methods for esports athletes. Such developments have happened time and time again in other activities that at first seemed like play or a pastime rather than a sport (such as baseball) or where relevant skill were originally used for other purposes (such as skiing, javelin throwing or running). The 20th century saw the rise of global sports where most sports had a clear athletic focus, building on movements, speed, stamina and strength. The 21st century does not represent the end of new sports, but rather the expansion of sportification into skills and activities deemed important in modern societies. We thus believe that computers and interactive technologies (in their various incarnations) will play an important role in the development of new sports. We thus believe that it is logical to imagine that skills related to ICT are and will continue to become sportified in the next decade or two. The central position of the computer (and the computer game console, or more generally, digital technologies) in contemporary society all but guarantees the emergence of new computer-mediated sports in in the near future. Skills that seem to be or are deemed to be important in the labour market will become popularized through sports, and sports will develop through the logic of professional work. The higher degree of corporate influence on the early sportification process in esports than in traditional sports have led to faster institutionalization and professionalization (Summerley 2019: 15.) but may also prove a challenge in terms of legitimacy and stability over time (Abanazir 2019).

The inclusion of e-sports in the Olympic program would mean a challenge to the notion of what a sport is, and possibly also to the organizational structure of the Olympic games. This may seem like a novel challenge, but we would do well to remember that the Olympic Games included art competitions until 1948! We believe that it would in fact be more surprising if esports were *not* a major Olympic sport by the 2030s than the opposite, although the issue of exactly who controls and ensures the stability of the arena/game in esports could potentially be a problem that separates esports from traditional sports.

We argue that the status of a sport is more dependent on progress in terms of sportification processes rather than any particular aesthetic or physical demands of the activity in question. This is not to say that the definition of sport could be expanded to include any activity that goes through a process of sportification<sup>6</sup>. In philosophy of sport, the focus on physical skill, large following, institutional stability and the arguably elusive concept “ludic attitude” are central to the definition of sport (Lopez Frias/Pérez Triviño 2016: 78). These aspects are important, but without a process of sportification, they are not enough if a game or an activity wants to be seen as a legitimate sport.

Esports have turned something distinctly related to play (computer games) into an activity where the best players now are professionals and play games for a living. The esports community have actively advanced such developments, but there have also been concerns about how rapid sportification and rationalization (and where play is transformed into work) results in poor working conditions and an increased objectification and control of athletes (Brock 2017).

## Conclusion

Sportification processes make no difference between work and play as they turn activities relating either to work or to play into something that is neither and both; playful work and laborious play. Sports could be seen as a link *between* play and work – containing both while simultaneously exploring and challenging the boundaries between them.

In a time and place where hard physical work was primary and leisure was scarce, many of the classical sports (e.g. cross-country skiing) originated in work-related practices. In an information society where leisure is abundant, where juvenescence can last for a decade and where digital technologies and computer games are ubiquitous, sports will instead originate from leisure-related activities like skateboard and computer games (esports). In a Swedish context, we have moved

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6 Such as for example competitive eating (previously organized by the International Federation of Competitive Eating, Inc. [IFOCE], now Major League Eating [MLE]), see <http://www.majorleagueeating.com/>; or Yukigassen, e.g. snowball fighting competitions, see <https://en.wikipedia.org/wiki/Yukigassen> and <http://www.yukigassen.se/en/>.

from a traditional stoic work ethic where the silent, dutiful (forestry) worker managed his job without making much of a fuss about himself (even if he happened to be a skiing champion). We have now instead moved towards a labour market where creativity, technical excellence, quick decisions and self-promotion (e.g. cultivating your personal brand) are hailed as hallmarks of successful knowledge workers. These characteristics could equally well describe the successful esports athlete who masters speed, who has the ability to stay focused over longer periods of time, who performs well under pressure in a supremely fast-paced activity and who carefully cultivates a personal brand.

We argue that those same forces that shape modern (information) societies also have consequences also for what competitive activities will develop into sports in the future and that esports sooner rather than later will become regarded as a legitimate sport – up to and including becoming an Olympic sport.

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